



Cleaner energy policies could save 175000 United States lives by 2030

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Aside from reducing carbon dioxide, the policies would also result in a reduction of methane, sulfur dioxide, nitrogen oxide, carbon monoxide, and particulate matter. By 2030, 175,000 deaths could be prevented by this plan.

It makes sense to estimate how much warming will likely occur with any given level of emissions, but a "budget for carbon" implies that the budget can't be overdrawn and that something significant could happen if it is, he said.

The researchers estimate that saving these lives could benefit the USA economy to the tune of \$250bn per year - more than it would cost to put the policies in place. United States transportation emissions reductions avoid ~ 0.03 °C global warming in 2030 (0.15 °C in 2100), whereas energy emissions reductions avoid ~ 0.05 - 0.07 °C 2030 warming (~ 0.25 °C in 2100). "These scenarios exceed current USA emissions reductions targets but are technically feasible and in accordance with the reductions we pledged to achieve at the COP21 climate conference in Paris last December and in our climate accord with China past year".

They then simulate the air pollution and health benefits of these policies. Heart disease and stroke are the primary deadly consequences of air pollution. The clean transportation plan could save approximately 120,000 deaths, the paper says, with 14,000 annually in the years that follow. It is more efficient to switch to renewables and electric cars than bolting on ever more pollution-reducing devices to power stations and vehicles.

Reducing carbon emissions could also save about \$250 billion worth of health benefits because of overall improved public health of residents. Research Scientists predict that if the United States would cut carbon emissions, it may save about 295,000 lives by 2030.

Reduction in PM2.5 air pollution (upper maps) and premature deaths (lower maps) as a result of implementing a clean energy policy (left-hand maps) and clean transportation policy (right-hand maps).

For PM2.5, around 9-11% of the benefits would be felt in other countries, the researchers say, while for ozone this is as high as 67-74%.

"It's a tall order, there's no getting around that", said Shindell.

The US would also gain economically from emissions cuts, with \$800bn saved by 2030 due to the reduced health burden, increased consumer spending and transition to new clean energy opportunities.

"Including longer-term, worldwide climate impacts, benefits roughly quintuple, becoming ~5-10 times larger than estimated implementation costs", the researchers concluded and published in the journal Nature.

Chip Knappenberger from the Center for the Study of Science at the Cato Institute, a libertarian thinktank, countered that the vast bulk of the health benefits from reducing greenhouse gas emissions as mentioned in the study would not come from reducing greenhouse gas emissions - but rather from air-quality improvements, most of which do not stem from climate-change mitigation.

"People should realize that emissions are having a big impact already".